



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,326	01/09/2004	Jeffrey W. Carr	RAPT-01003US1	7474
23910	7590	04/28/2009	EXAMINER	
FLIESLER MEYER LLP 650 CALIFORNIA STREET 14TH FLOOR SAN FRANCISCO, CA 94108			PASCHALL, MARK H	
			ART UNIT	PAPER NUMBER
			3742	
			MAIL DATE	DELIVERY MODE
			04/28/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/754,326	<b>Applicant(s)</b> CARR, JEFFREY W.	
	<b>Examiner</b> Mark H. Paschall	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-15,23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-15, 23,24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3-7,9,10,12-15,23,34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Selitzer in view of either Finche et al , Saliner et al 4,652,723 or Heck 6,103,184

Selitzer teaches the claimed subject matter for the reasons set forth on page 2 of the prior office action, but does not set forth the surface modification tool as comprising a flame torch using combustion. Patents to Heck, Saliner et al I and Finche et al are cited for disclosing flame torches, which cause reactive interaction with substrates, used to modify the surfaces of the substrates. See the abstract in Saliner et al and see paragraph 2, detailed description and claim 1 in Heck for mention of combustible gas and plasma flame. Note that the temperatures produces are in the ranges called for in both the instant disclosure and the instant claims. Use of combustible components is self sustaining and efficient and in view of these teachings it would have been obvious to modify the Selitzer et al system with combustion flame torches to effect the temperature to effect the surface modification, to more efficiently modify the surfaces.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Selitzer in view of either Heck, Saliner et al or Finche et al as applied to the claims above, and further in view of Wagner. The patent to Wagner is relied on to set forth use of a flame suppressor, as set forth on page 3 in the prior office action. In view of this teaching it would have been obvious to modify Selitzer further to include a flame suppressor for the inherent advantage of flame suppression, dependent on the type of plasma gas used.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3-7,9,10,12-15,23,24 are rejected under 35 U.S.C. 102(b) as being anticipated by Selitzer et al. figures 2a and 6a in Selitzer et al teach an inductive plasma torch, with nested components, capable of directing a plasma gas which is flammable, if desired, such limitation comprising intended use of the apparatus and not patentably limiting.

### ***Response to Arguments***

Applicant's arguments filed 1-20-2009 have been fully considered but they are not persuasive. Applicant's remarks advance that "nowhere does Selitzer et al in view of either Heck, Saliner et al or Finche teach or suggest a torch including an outer tube

Art Unit: 3742

to communicate a combustible process gas to generate a flame, and an inner tube nested in the outer tube to communicate a reactive precursor to the flame". Applicant's attention is directed to figures 2a and 6a in Selitzer , depicting nested inner and outer tubes as defined. Claim 1 also defines a means for positioning the work relative to the torch, notoriously old in the art. The language calling for specific gases in the torch merely define an intended use of the torch, considering that the claimed torch apparatus is clearly the apparatus taught by Selitzer. the intended use/method limitations for the claimed apparatus are not patentably limiting since the structure taught in the Selitzer patent is clearly capable of passing any gases between the nested components. The patents to Heck, Saliner et al or and Finche et al are applied merely for evidencing that combustible gases can be used in plasma torches, per se, as set forth in the above rejections. Claim 1 merely comprises inner and outer tubes and means to move the work relative to the torch, such features conventional as set forth in the above rejections. The claims are above rejected as anticipated by Selitzer, in response to Applicant's claim amendments. Applicants are seeking patent protection for an apparatus, not a method of using this apparatus. As per new claims 23 and 24, if a combustible gas were to be used it is inherent that a flame would be produced downstream of the torch end and it is inherent that a reactive gas would be introduced upstream of the torch end, as submitted. The amendments to claim 1 defining a second source of reactive precursor replaces language claiming the same and is unpatentable for the same reasons.

Art Unit: 3742

The patents to Saliner et al and Heck are applied for evidencing that a combustible gas can be burned in a plasma torch to produce a plasma flame for impingement on a workpiece.

### ***Conclusion***

Applicant's arguments with respect to claims 1,3-10, 12-15, 23 and 24 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark H. Paschall whose telephone number is 571 272-4784. The examiner can normally be reached on 7am - 3pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark H Paschall  
Primary Examiner  
Art Unit 3742

Mhp

/Mark H Paschall/  
Primary Examiner, Art Unit 3742